



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/987,380	12/09/1997	MASAO INOUE	Q48500	6198

7590 02/19/2009
SUGHRUE MION ZINN MACPEAK & SEAS
2100 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 200373202

EXAMINER

WANG, SHENGJUN

ART UNIT	PAPER NUMBER
----------	--------------

1617

MAIL DATE	DELIVERY MODE
-----------	---------------

02/19/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 08/987,380	Applicant(s) INOUE ET AL.	
	Examiner Shengjun Wang	Art Unit 1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7,10,11,13 and 16-19 is/are pending in the application.
- 4a) Of the above claim(s) 16-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-3,5-7,10,11,13 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1617

DETAILED ACTION

Receipt of applicants' remarks submitted November 13, 2008 is acknowledged.

Claims Rejections 35 U.S.C. - 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5 -7, 10, 11, 13 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tocker (WO 91/10362 of record) in view of Burger et al. (WO 93/04017, CA 2115998 is an English equivalent) and Kogler et al. (US Patent 4,772,490, of record).

Tocker teaches a pesticidal granule composition coated with polyurethane. See, particularly, page 2, line 23-31. The polyols employed has at least two hydroxyl groups and the polyisocyanate has at least one isocyanate substituent (-NCO). See, particularly. Page 4, lines 1-30. The amount of polyisocyanate employed is about 1-20% by weight, and the reaction temperature is at ambient temperature or above. The coating procedure can be carried out stepwise. See, particularly, page 5, line 5-22. Tocker further teaches that, as required by some practice, e.g., slow release of the active component, monomers containing more isocyanate or hydroxyl group may be employed to increase the degree of cross-link in polyurethane. See, particularly, page 10, lines 16-24. The polyisocyanate employed therein are, for example, *triisocyanate toluene*, 1, 5-naphthalene diisocyanate, etc. the polyols employed therein are, for example, glycerin, glycol or other polyhydric alcohols. See, particularly, page 4, lines 3-30.

Art Unit: 1617

Tocker does not teach expressly the employment of the particular procedure herein for making the coating wherein the polyols and polyisocyanate are mixed before the application to the granules.

However, Burger et al. teach that the particular procedure herein, i.e., mixing the polyol and polyisocyanate before applying them to the granules, is known for coating agrochemical granules for forming multiple layers of polyurethane coating. The coating made by such procedure are known to be with sufficient homogeneity of the individual particle coating, and be physically stable, resistant to frost and provide sustained release of active ingredients. See, particularly, the abstract, page 1, the examples and the claims. Kogler et al. also teaches method of coating granular agrochemicals with polyurethane for controlled release of active ingredients, wherein polyisocyanate and polyols are premixed. See, particularly, the abstract, examples 2-5 in columns 5 and 6. The coating's properties may be manipulated by using different polyols and different isocyanates. See, particularly, column 2, line 49 bridging column 3, line 29.

Therefore, it would have been prima facie obvious to a person of ordinary skill in the art, at the time the claimed the invention was made, to modify the pesticidal granules of Tocker by mixing the polyols and polyisocyanates first followed by coating the mixture to the granules.

A person of ordinary skill in the art would have been motivated to make such modification because the modification will lead to a stable, controlled releasing coating. Claim 19, which particularly recites the employment of polyisocyanate having tri-isocyanate groups and polyol having tri hydroxyl group, would have been obvious because the prior art teach the employment of a variety of polyisocyanate and polyol, including those with tri isocyanate groups and tri hydroxyl groups. Further, the amount of those multiple functional monomers are known

Art Unit: 1617

to be a parameter that affects the properties of polyurethane. As it is well-settled that optimization of result affecting parameters would be within the skill of artisan.

Regarding claims 5, 7, 10,11 and 13 which recited water absorption ratio of the polyurethane is not more than 5%, it is noted that the reference and the instant application are employing the essentially the same polyols and polyisocyanates. See, pages 13-14 in the specification and page 4 in Tocker. Therefore, the polyurethane coating of Tocker is reasonably expected to have the same water absorption ratio as claimed herein. Further, the optimization the properties of the coating accordingly by using different isocyanate or polyol is considered within the skill of artisan, as discussed by Tocker et al. (cross link degree) and Kolger et al. (different polyol and isocyanate).

Response to the Arguments

Applicants' remarks submitted November 13, 2008 have been fully considered, but are not persuasive.

Applicants' remarks regarding Tocher reference are not persuasive for reasons discussed in the Borad's decision issued December 3, 2007. Particularly, the Board states:

Tocker teaches a polyurethane coated granular pesticidal composition. Admittedly, Tocker does not teach mixing the polyol and the polyisocyanate before application to the granules, but Burger and Kogler are cited by the Examiner to demonstrate that it is known in the art to coat agrochemicals with polyurethane to obtain sustained release of the active agent, wherein the polyol and the polyisocyanate are mixed before application to the granule. One of ordinary skill would have understood that the process of Kogler and Burger could be used to coat the pesticidal granular particles of Tocker, as such a combination would also produce a polyurethane coated pesticide that would allow for sustained release of the active ingredient. As noted by the Court in *KSR*, a "person of ordinary skill is also a person of ordinary creativity, not an automaton." 127 S. Ct. at 1742. The arguments proffered by Appellants reflect an overly restrictive approach to the obviousness analysis and do not take into consideration the knowledge, skill, and creativity of the ordinary artisan. (page 5 bridging page 6).

Art Unit: 1617

2. Further, In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

3. Applicants' arguments regarding the water absorption recited in claims 5, 7, 10 and 13 are not persuasive, particularly, in view of the discussion of the Board's decision. See, pages 7-8 of the decision.

Further, since the cited references suggest the same polyisocyanate and polyol. The polyurethane obtained from the same polyisocyanate and polyol would have reasonably expected to have the same physical properties. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties Applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ 1655, 1658 (Fed. Cir. 1990). See MPEP 2112.01.

4. *This application contains claims 16-18 and claims 1, 3, 5, 11 (all in part) (epoxy resin) drawn to an invention nonelected with traverse in the reply filed on 12/27/2000. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.*

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

Art Unit: 1617

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shengjun Wang whose telephone number is (571) 272-0632. The examiner can normally be reached on Monday to Friday from 7:00 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan, can be reached on (571) 272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Shengjun Wang/
Primary Examiner, Art Unit 1617